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1992 Gordon Research Conference on Physical Electrochemistry

ONR Grant No. N00014-92-J-1493

The Gordon Research Conference on Physical Electrochemistry was held from August 3-7, 1992 at the Colby Sawyer School in New London, New Hampshire. There were approximately sixty participants, including representatives from Denmark, Japan, Great Britain, Spain and France. In addition, about twenty percent of the participants were from industry or government laboratories. Moreover, there was a significant number of young scientists including assistant professors, post-doctoral associates and graduate students. The above mentioned aspects gave the conference a close-knit ambiance, while maintaining a great deal of diversity.

The program combined researchers in the mainstream of electrochemistry, as well as individuals, who, while not electrochemists, work in areas of relevance to the study and understanding of electrochemical phenomena. The choice of speakers represented a combination of established researchers as well as some younger investigators. This mix gave the conference a sense of what is of current relevance as well as what areas will be forthcoming. The main themes covered in the program (a copy of the program is included) were:

1. The use of scanned probe microscopies to the study of electrochemical phenomena with emphasis on STM and AFM.
2. Spectroscopic techniques in the study of electrochemical interfaces with emphasis on synchrotron radiation
3. Theoretical aspects of the structure of water next to surfaces, electron transfer and superconductivity and their relation to electrochemical phenomena
4. Studies on Langmuir-Blodgett and self-assembling monolayers.
5. Recent developments in electrocrystallization and electrosynthesis.

We deliberately chose to have a smaller number (18) of speakers than is typically encountered in most Gordon Research Conferences in order to allow them sufficient time to present and develop a general theme of the research as well as to be able to present their most recent work in detail. This allowed for the presentation and thorough discussion of the most recent work in the above-mentioned areas.

The discussion sessions were the best that I have ever seen in any Gordon Conference. They typically averaged close to one hour per talk and, in some cases, extended well beyond an hour and into the night. The discussions were broad based with many participants being involved.

There was a poster session with approximately 20 contributions. It was generally felt that the posters were of very high quality and that there was ample time for the participants to study and discuss them.

In general, the conferees, felt that this was a very successful and enriching conference that was well worth attending.

GORDON RESEARCH CONFERENCES

(Please TYPE or PRINT)

Physical Electrochemistry

Title of Conference

August 3-7, 1992

Conference Dates

Colby Sawyer School

Host School (Site)

Hector D. Abruna

Chair

William E. O'Grady

Vice Chair

Monday Morning - 9:00 a.m. to 12:15 p.m.

H.S. White

Discussion Leader

B. Hammers

1. Speaker

Scanned Probe Microscopies: Capabilities and Limitations

Title of Presentation

J. Porter

2. Speaker

Studies of Electrochemical Interfaces with Electron Tunnelling Techniques

Title of Presentation

3. Speaker

Title of Presentation

Monday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

M. Weaver

4. Speaker

Atomic Structure and Dynamics of Ordered Metal-Solid Interfaces by STM and IR

Title of Presentation

M. Porter

5. Speaker

Organic Monolayer Films: Structure, Reactivity, STM and AFM Studies

Title of Presentation

Tuesday Morning - 9:00 a.m. to 12:15 p.m.

L. Blum

Discussion Leader

M. Berkowitz

1. Speaker

Water Next to Metallic Surfaces

Title of Presentation

W. Little

2. Speaker

Superconductivity: A Study from Its Surface

Title of Presentation

3. Speaker

Title of Presentation

Tuesday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

B. Miller

4. Speaker

Electrochemistry of Superconductors

Title of Presentation

A. Kuki

Approaches to Superexchange in Long-Range

Wednesday Morning - 9:00 a.m. to 12:15 p.m.

R. Corn
Discussion Leader

M. Teney
1. Speaker Surface X-ray Scattering of Electrochemical Interfaces
Title of Presentation

C. Korzeniewski
2. Speaker Vibrational Spectroscopy at Interfaces
Title of Presentation

3. Speaker _____
Title of Presentation

Wednesday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

A. Russell
4. Speaker The use of Synchrotron Radiation in the Far-Infrared in the Study of Electrochemical Interfaces
Title of Presentation

J. Hupp
5. Speaker Surface Intervalence Reactions at Semiconductor Surfaces
Title of Presentation

Thursday Morning - 9:00 a.m. to 12:15 p.m.

J.S. Facci
Discussion Leader

J. Als-Nielsen
1. Speaker Studies of L-B Films and Liquid Interfaces with X-ray Synchrotron Radiation
Title of Presentation

M. Fujihira
2. Speaker Photoinduced Electron Transfer in L-B Films
Title of Presentation

3. Speaker _____
Title of Presentation

Thursday Evening - 7:30 p.m. to 10:00 p.m.

Discussion Leader

C. Chidsey
4. Speaker Long-Distance Electron Transfer in Self-Assembling Monolayers at Electrode Surfaces
Title of Presentation

S. Creager
5. Speaker Redox Chemistry in Mixed Monolayer Films
Title of Presentation

Friday Morning - 9:00 a.m. to 12:00 p.m.

D. Rolison
Discussion Leader

M. Ward
1. Speaker Electrocrystallization of 1-D Materials
Title of Presentation

P. Pintauro
2. Speaker Novel Developments in Organic Electrosynthesis
Title of Presentation

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